

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545174

Luminaire Tested: **FMR-12-1-LD4-2STD-35-UNV-93-97-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P545174
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-1-LD4-2STD-35-UNV-93-97-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

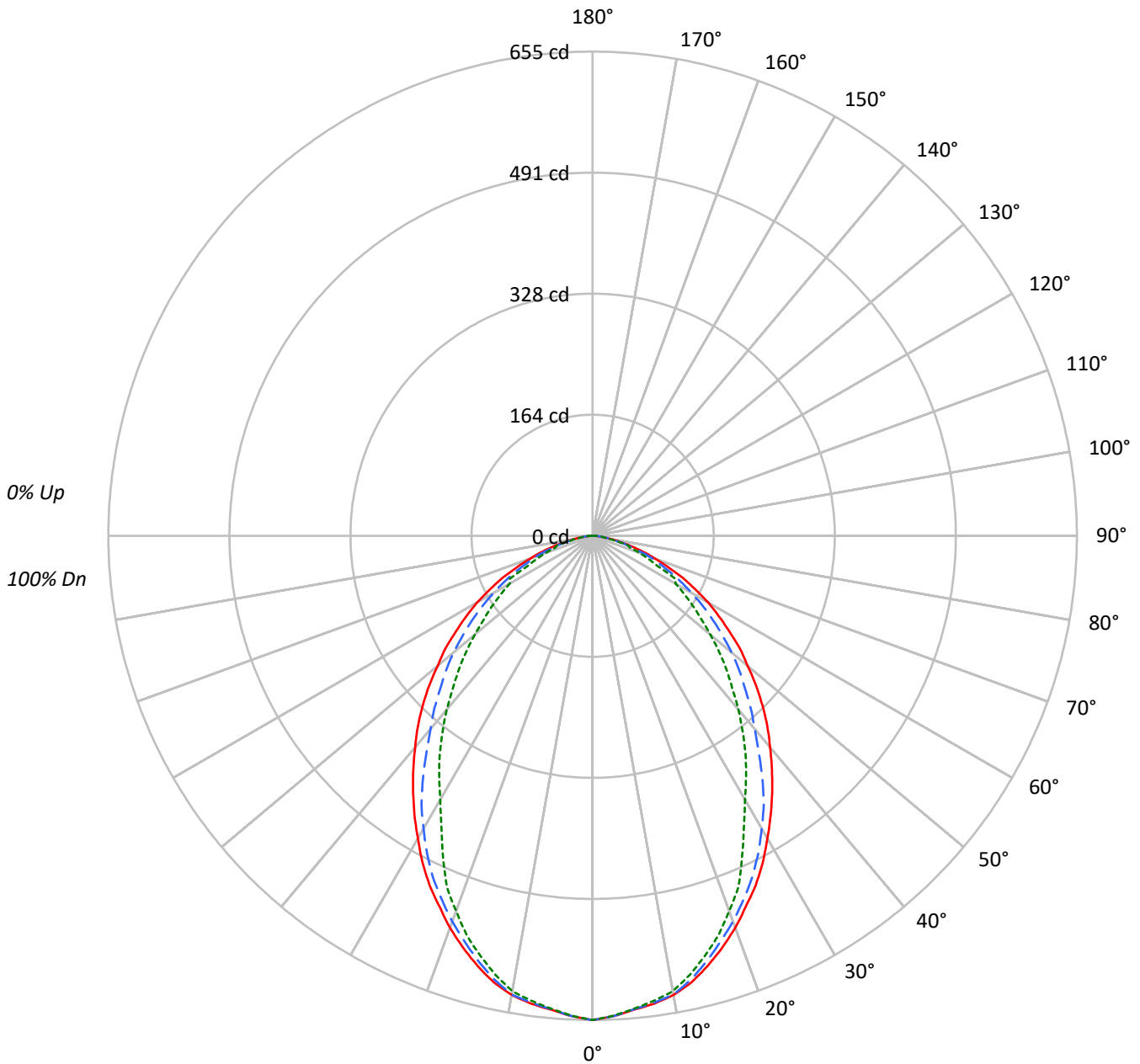
Lumens per Lamp: N/A
Luminaire Lumens: 1286.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P545174

CATALOG NUMBER: FMR-12-1-LD4-2STD-35-UNV-93-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545174

CATALOG NUMBER: FMR-12-1-LD4-2STD-35-UNV-93-97-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				50				30				10				0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7051	7051	7051
5°	6955	6948	6939
10°	6895	6887	6837
15°	6710	6642	6549
20°	6463	6359	6186
25°	6197	6062	5684
30°	5874	5685	5121
35°	5562	5255	4737
40°	5247	4789	4310
45°	4946	4427	3897
50°	4578	4109	3475
55°	4236	3723	3113
60°	3879	3326	2788
65°	3413	2914	2468
70°	2814	2549	2096
75°	2237	1955	2046
80°	1500	1407	1314
85°	939	1124	1309



TEST NUMBER: P545174

CATALOG NUMBER: FMR-12-1-LD4-2STD-35-UNV-93-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.0	4.7
10°-20°	167.4	13.0
20°-30°	231.7	18.0
30°-40°	247.0	19.2
40°-50°	225.4	17.5
50°-60°	176.6	13.7
60°-70°	115.1	8.9
70°-80°	51.0	4.0
80°-90°	10.9	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	460.0	35.8
0°-40°	707.1	55.0
0°-60°	1109.0	86.2
0°-90°	1286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1286.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	644	643	643	642	642	61
15°	602	602	596	590	588	169
25°	522	519	510	492	479	240
35°	423	420	400	370	360	265
45°	325	318	291	267	256	250
55°	226	219	198	175	166	202
65°	134	126	114	117	97	132
75°	54	50	47	45	49	58
85°	8	8	9	10	11	10
90°	0	0	0	0	0	



TEST NUMBER: P545174

CATALOG NUMBER: FMR-12-1-LD4-2STD-35-UNV-93-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	655.1	655.1	655.1	655.1	655.1
2.5°	650.5	650.5	650.5	649.8	649.8
5°	643.7	643.0	643.0	642.2	642.2
7.5°	638.4	637.7	636.9	636.1	634.6
10°	630.8	630.8	630.1	626.3	625.5
12.5°	618.7	618.0	614.9	609.6	608.1
15°	602.1	602.1	596.0	589.9	587.7
17.5°	583.9	583.1	575.6	569.5	566.5
20°	564.2	562.7	555.1	545.3	540.0
22.5°	542.2	542.2	533.1	520.3	515.0
25°	521.8	518.8	510.4	492.3	478.6
27.5°	498.3	493.8	484.7	458.9	443.0
30°	472.6	470.3	457.4	424.1	412.0
32.5°	448.3	444.5	430.9	396.1	386.2
35°	423.3	420.3	399.9	369.6	360.5
37.5°	398.3	394.6	368.8	344.6	333.2
40°	373.4	368.8	340.8	318.8	306.7
42.5°	349.9	343.8	316.6	293.1	279.4
45°	324.9	318.1	290.8	266.6	256.0
47.5°	299.9	293.8	268.8	243.9	231.7
50°	273.4	268.1	245.4	220.4	207.5
52.5°	251.4	243.1	221.1	196.1	185.5
55°	225.7	218.9	198.4	174.9	165.9
57.5°	202.2	195.4	176.5	154.5	146.9
60°	180.2	170.4	154.5	135.6	129.5
62.5°	156.0	148.4	134.8	118.9	126.5
65°	134.0	126.5	114.4	116.6	96.9
67.5°	109.8	106.0	95.4	84.8	81.8
70°	89.4	84.8	81.0	69.7	66.6
72.5°	71.2	66.6	61.3	55.3	53.0
75°	53.8	50.0	47.0	44.7	49.2
77.5°	37.1	35.6	33.3	31.0	30.3
80°	24.2	23.5	22.7	22.0	21.2
82.5°	14.4	14.4	14.4	14.4	14.4
85°	7.6	8.3	9.1	9.8	10.6
87.5°	4.5	4.5	5.3	6.1	6.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)